

THE INFLUENCE OF IMPLICIT TAX IN MAKING PROFITABLE FOREIGN DIRECT INVESTMENT DECISIONS: EVIDENCE OF INDONESIAN LISTED COMPANIES IN ALL SECTORS

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Abstract: The aim of this study was to test whether the implicit tax has an influence on tax explicitly in the context of Foreign Direct Investment for the companies listed on the Indonesia Stock Exchange 2010-2013. The study sample as many as 34 companies, net of outlier as much as 6 data, the sample to 130 data. This study uses multiple regression. The results showed that the implicit tax that does not have a significant positive influence on the explicit tax. This is because the role of tax planning and friction market in Indonesia, which weakens the influence.

Keywords: implicit tax, Foreign Direct Investment, explicit tax

Abstrak: Tujuan dari penelitian ini adalah menguji apakah *implicit tax* memiliki pengaruh terhadap *explicit tax* dalam konteks *Foreign Direct Investment* untuk perusahaan-perusahaan yang terdaftar di Bursa Efek Indonesia periode 2010-2013. Sampel penelitian ini sebanyak 34 perusahaan, setelah dikurangi outlier sebanyak 6 data, sampel penelitian menjadi 130 data. Penelitian ini menggunakan regresi berganda. Hasil penelitian menunjukkan bahwa *implicit tax* memiliki pengaruh positif yang tidak signifikan terhadap *explicit tax*. Hal ini disebabkan karena peranan dari perencanaan pajak dan friksi pasar di Indonesia yang memperlemah pengaruh tersebut.

Kata Kunci: *implicit tax, Foreign Direct Investment, explicit tax*

BACKGROUND

Tax is one of many influential factors that organizations must consider in making business decisions, including project investment decisions. It has a significant impact on an operation's cash flow, and in many cases the making or breaking of a project is greatly determined by tax effects (Brigham & Ehrhardt, 2005). The rapid and continuous changes in a country's tax laws complicate managements even more in determining the most profitable, yet feasible business investment to execute. Managers must be aware of these changes and understand how they influence the behavior of employees, customers, suppliers, and competitors; hence, companies can avoid investing with a competitive disadvantage (Scholes & Wolfson, 1992).

The existence of free market systems worldwide triggers the increasing numbers of multinational companies (MNC) which operate in multiple tax jurisdictions and are highly involved in making cross-border (foreign) investment business decisions in order to finance their operations. There are many types of foreign investments, but this research will focus on one: Foreign Direct Investments (FDI). Many researches have tried to connect taxation as one of the factors that influence the tough competition of FDI

worldwide. According to Davies, Norbäck, and Koru (2010), due to the importance of FDI in the world economy, leading to the increased research conducted regarding government policies to influence MNC, many believe that taxation is the source of attention.

According to Feld and Heckemeyer (2008), a lot of previous research conducted regarding FDI and taxation vary in some aspects; mostly in the underlying theoretical concepts used by those research that result in different outcomes and perspectives. Also, these empirical studies vary widely with respect to specification, sample size and so on. One very important aspect in which they differ is the dependent variables used, since FDI concepts can be very broadly interpreted. Even when tax is used as the dependent variables, the tax variables themselves also vary based on the different alternative concepts, such as statutory, average, marginal, effective tax rates, and others.

In addition, many policy analysts are actually using one or more frameworks in order to help them examine the possible influence of a country's tax policy in relation to making FDI decisions; for example, there are the OECD policy framework for investment, the OLI framework, the neoclassical investment model, and others. However, maybe the most widely used framework is the neoclassical investment model that uses marginal and average effective tax rate as parameter. Even with this standing, such tax measures provided by neoclassical investment model are ignoring several factors that influence the actual tax burden on FDI, such as tax planning, tax liabilities, the possible unexpected change of rates of return, and other taxes not considered in the model, which would possibly give very different policy implications (Organisation for Economic Cooperation and Development, 2007).

Moreover, researches have been conducted in order to show the sensitivity of FDI to matters regarding taxation. Most researches, however, focus on explicit factors that might influence FDI, such as multinational tax treaties between countries, or unilateral government policies in order to attract foreign investment, such as providing foreign tax credit and/or exemption. In a study conducted by Egger and Raff (2011), it uses explicit corporate tax rate and tax base policy, measuring their consistency with the tougher international competition for FDI over the last decades. Also, the problem of double taxation has been the major concern in the flow of investment worldwide. The matter is actually regulated in Double Taxation Treaties (DTT), which is a part of multinational tax treaties, and has purpose in eliminating double taxation and preventing tax evasion, both of which are caused by multijurisdictional taxation and are influential toward FDI. In short, what can be concluded here is that, despite the usefulness of the mentioned and other similar researches, there is still a research gap that rarely connects FDI with implicit factors of taxation.

Moreover, according to Jennings *et al.* (2011), in the context of FDI, it is important to focus on the relationship between implicit and explicit tax for several reasons. First, from the perspective of tax policy, preferential tax provisions that lower explicit taxes are often intended to provide incentives to attract investment resources to certain economic activities, and the existence of implicit taxes serves as evidence that the policies are working and that resources are shifting toward the tax-favored activities (low explicit tax). Second, investors are interested in whether low explicit tax rates are evidence of a persistent benefit to the company or whether that benefit is lost to other parties via implicit taxes. Finally, managers are interested in whether optimal tax planning provides a competitive advantage or is lost to implicit taxes that offset low explicit taxes.

Due to the weakness of available frameworks, the lack of researches that use implicit factors of taxation as measurement of FDI decisions, and the importance of relationship between implicit and explicit tax for companies, this research has a purpose to focus more on the significance of influence of implicit tax in making profitable FDI decisions. A relation of significance will be tested between implicit tax with explicit tax rate. Implicit tax is measured with pretax return, and explicit tax rate is measured in effective tax rate. To narrow down the scope of the research, this research will only examine Indonesian-established public companies that have foreign operations, defined to be operating as multinational companies (already engaged in FDI) and those that conduct export transactions, but not yet engaged in FDI.

Problem Formulation. Due to the explanations above, it is concluded that this research aims to fill the gap in the lack of previous research that connects implicit tax in making profitable FDI decision. Therefore, the following problem is formulated: Does implicit tax affect explicit tax in FDI context for companies listed in Indonesia Stock Exchange. **Purpose of Research.** Following the problem formulation, the objective of the study is as follows: This research is conducted in order to find empirical evidence regarding the relationship between implicit tax and explicit tax in FDI context for companies listed in Indonesia Stock Exchange which operate in all sectors.

THEORETICAL BASE

Foreign Direct Investment. From the macroeconomic point of view, FDI is a particular form of capital flows across borders, from countries of origin to host countries, which are found in the balance of payments (Denisia, 2010). According to Feld and Heckemeyer (2008), FDI in its broad definition does not only comprise real investments but also financial flows due to mergers or acquisitions of already existing capital. This is why many researchers believe that the central focus here is the real economic activities, namely investments in the form of PPE (property, plant, and equipment).

According to Morgan and Katsikeas (1997), FDI theories in the context of international trade can be represented by three theories: market imperfections theory, international production theory, and internalization theory, with an addition of eclectic theory stated in the research of Feld and Heckemeyer (2008).

Explicit Tax in Measuring the Attractiveness of Foreign Direct Investment. Explicit tax is simply the amount of tax that is payable by companies to government. This can be in the form of corporate income tax, value-added tax, and other forms of taxes imposed by the ruling government. Seeing FDI from tax aspects, companies are always set to consider the country's explicit tax before deciding to execute the investment (Agostini & Tulayasathien, 2003). Capital (direct) investment is more attractive when the resulting company activities will be taxed in lower explicit rate. This is why tax haven countries exist and become so attractive for investors because of their lenient regulations obliging tax payment with very low rate, or even none.

Previous research has been trying to connect explicit tax and a firm's decision to execute FDI, since it is the most obvious and apparent factor of taxation that can be easily observed. Treaty shopping, which is basically 'borrowing' facilities of the treaty related partners while one is not really any of these parties, has been seen as a way for companies to escape the burden of this tax when they are conducting cross-border transactions. When

two countries are participating in a tax treaty, they are making compromise which could be viewed as beneficial for both parties. The intention of each country's decision in setting tax rates varies greatly due to different motivation, national economic condition, political ideologies, and many other factors. Tax incentives provided in tax treaties, such as in a form of lower tax rates, or tax haven countries' government decision to provide extremely low tax rates, sometimes are intended to attract foreign investment. However, the low tax rates provided must be compensated by something seen as more profitable for the country's economy. It can be in a form of economic growth, social welfare of its citizens, or implicit taxes. This is where the concept of implicit tax arises, namely when a country compensates the lost income caused by low explicit tax rate by causing investors to eventually receive lower rate of return.

Literature Review

Researcher	Variables		Result of Research
	Dependent	Independent	
Ross Jennings, Connie D. Weaver, William J. Mayew (2011)	Effective Tax Rate	Pretax return, Firm's size, Capital intensity, Inventory intensity, Research and development intensity, Firm's leverage, Foreign operation intensity.	This research sees implicit tax in the corporate sector in the context of TRA86 (Tax Reform Act of 1986) in the United States. It finds that the significance of the positive relationship between pretax return and effective tax rate is highly affected by the factor of tax preferences.
Boudewijn Janssen and Willem Buijink (2000)	Effective Tax Rate	Pretax return	They ultimately concur with the previous theory about the negative relationship between implicit and explicit taxes; however, other added factors in the market, such as market frictions, prevent the achievement of after-tax return equalization, concluding from the research that the relationship is not strong enough.
David Weisbach (1999)	A. Pretax return	Government's education incentives	Implicit tax exists when government of the foreign country has policy on giving out tax benefits in the form of education incentives, perhaps as scholarship credits to students. The result could be the up-bidding of price of education, lower pretax return on this investment, and higher implicit tax.

Researcher	Variables		Result of Research
	Dependent	Independent	
Patrick Wilkie (1992)	Pretax return on equity	Pretax equivalent of tax subsidies on equity	There is a consistent and significant negative relation between pretax return and tax subsidy, implying that high tax subsidy results in lower pretax return. This also suggests a negative relationship between implicit and explicit taxes. However, the actual relationship found was weaker than hypothesized by the implicit tax hypothesis for a perfect competitive market and frictionless economy, which suggests that market frictions might be present.
Grant Richardson and Roman Lanis (2007)	Effective Tax Rate	Firm size Firm's leverage Capital intensity Inventory intensity R&D intensity (Taking consideration of Ralph Review tax reform effect)	The research shows that these variables influence ETR in a certain way. Previous research showed conflicting results regarding the relationship, and this research shows consistency between data results and hypotheses. Also, observing the Ralph Review tax reform, the result is similar with research of Jennings <i>et al.</i> (2011) that the reform impact the extent of associations between these variables to ETR; however, it is not to a great deal of extent if it was compared to the previous state of pre-reform. The aspect of implicit tax is not observed here.
Sonja Rego (2003)	Domestic and worldwide effective tax return	Firm size (taking consideration of economies of scale in tax planning and tax costs of greater public scrutiny) Pre-tax income Foreign operations	Rego conducts research regarding effective tax rates with sample of U.S. multinational corporations. She found that such companies are higher in size, pretax income, and intensity of foreign operations; Hypothesis two and three are accepted while the first one is rejected. Also, economies of scale in tax planning are observed here. It is found that tax planning triggers the decrease of present value of tax payments and generally increases the after-tax rate of return to investors. However, implicit tax aspect in reaching equalization of after-tax return is not observed here.

Implicit Tax in Making Foreign Direct Investment Decision. When discussing implicit taxes, tax preference concept is the key. Wilkie (1988) states that tax preferences are cross-sectional and intertemporal differences in the firms' exclusions, deductions, and

other items that cause taxable income to diverge from pre-tax accounting income. The purpose for many of these tax incentives is to encourage firms to shift their investment, production, and financing decisions toward an equilibrium that the government has set to yield greater social welfare, instead of toward standard of equilibrium set by private market (Wilkie, 1992). Because of positive or negative tax preferences, implicit taxes arise due to the increases in prices of investments or assets with lower explicit tax rate (referred to as tax-favored investments), resulting in the decrease of demand. Consequently, the pretax rate of return will be lower for this type of investments if it is compared with tax-disfavored investments. The principle is that through this lower pretax rate of return that investors are willing to receive, taxes are paid implicitly (Scholes & Wolfson, 1992). Therefore, pretax rate of return can be used as a proxy of implicit tax; more specifically, lower pretax return indicates higher implicit tax.

When a business decides to invest abroad, the investment does not only bear explicit tax rate, but also implicit tax rate relative to the home-country investments. Scholes and Wolfson (1992) associate implicit tax with investing abroad. Implicit tax can arise because of the foreign country's tax policies, such as providing generous tax benefits to encourage investment; as a result, there are competitions to garner this benefit which will result in lower pretax rate of return. The concept is the same with the one that has previously been explained. Tax benefits provided by government on certain investments will trigger the up-bidding of prices, which will result in lower pretax return. Not only tax benefits, but other tax policies imposed by government, such as government subsidy, tax, or regulation (such policies are often called tax preferences), play their roles in affecting prices that will ultimately result in the existence of implicit tax in order to redistribute the costs of the policy (Weisbach, 1999).

Conceptual Framework. This framework depicts the relationship between variables, where pretax return as the independent variable is hypothesized to be having a positive relationship with effective tax rate. In addition, there are other control variables which are also predicted to have an influence towards ETR.

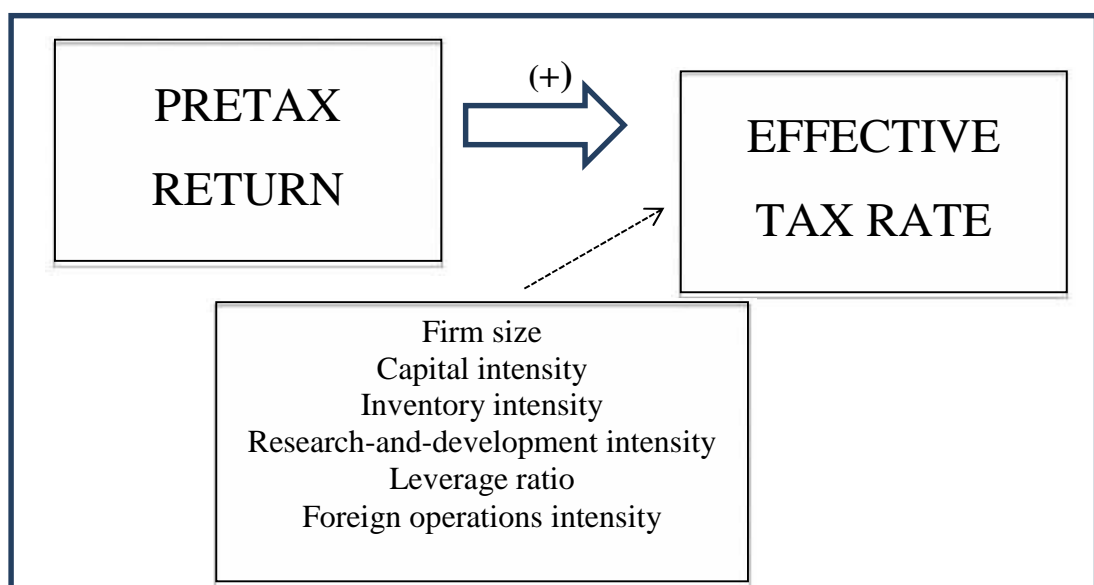


Figure 1. Research Framework

Hypothesis Development. The basic relationship between implicit and explicit taxes is based on economic theory (Scholes & Wolfson, 1992; Wilkie, 1992) which rationalizes that, differences in explicit tax rate because of more favorable tax treatment for certain investments compared to the others coincide with implicit tax due to market competition. Jennings *et al.* (2011) states that in FDI context, capital (direct) investment is more attractive when the resulting company activities will be taxed in lower explicit rate (the market demand increases). However, at the same time, to fulfill this demand, input costs will increase and output prices (implicit price deflator, equal to current-dollar output, divided by real output) will decrease. In a competitive market, this process will lower the pretax return (higher implicit tax) of companies with low explicit tax. This means, total tax burden, which is the explicit plus implicit taxes, should be equal for companies in competitive market.

According to economy theory, in a competitive market, pretax return is positively associated with effective tax rate, implying that negative relationship should exist between implicit and explicit taxes, triggering the equalization of after-tax return; otherwise, there is a possibility of tax arbitrage. Some research have used this existing theory as a base in connecting the relationship between explicit and implicit tax (Berger, 1993; Wilkie, 1992; Gupta & Newberry, 1997; Janssen & Buijink, 2000; Jennings *et al.*, 2011). Nevertheless, the significance of this relationship has been an issue. This is due to the uncontrollable factor of market frictions that are hard to eliminate and differ from country to country due to different market conditions; also the roles of changing government regulation, tax planning and tax shelter have been predicted to contribute to weaken the relationship.

Based on the above arguments, the hypothesis to be tested is:

H₁: Pretax return has a significant positive relationship with effective tax rate.

METHOD

Population and Sample. This research uses the population of companies listed in Indonesian Stock Exchange (IDX) which operate in all sectors of industry. In Bank Indonesia's survey (2012, as cited in PwC Indonesia, 2013), throughout 2011 and 2012 mining industry stood out amongst other sectors, showing a continuous increase in its contribution to Indonesian economy. It accounted for 5% to 6% of total GDP, and over 17% of export revenues. Moreover, according to statistics of Indonesian Investment Coordinating Board (2012), FDI realization in mining sector (showing approximately US\$ 1.1 billion and comprising 16.8% of the total) competed tightly with basic industry-chemical sector and pharmaceutical sector (also approximately US\$ 1.1 billion with a slight advantage of 17.6%). Statistics from Indonesian Investment Coordinating Board (2013) at subsequent year then showed that the competition was still between these two big groups. There was an increase into US\$ 1.4 billion (20.7%) in mining sector, taking the spot for the highest FDI realization from basic industry-chemical and pharmaceutical, which show a decline of US\$ 0.3 billion, comprising 11.3% of the total.

This observation shows that there is a heightened competition contributed by foreign multinational companies in FDI. Thus, it should be the trigger for Indonesian companies to keep expanding their business operations, compete in the global market, and participate in the tough competition of FDI worldwide. They should establish business operation policies that will set guidelines in making the most profitable FDI decisions.

Sampling is conducted by purposive sampling technique with the following criteria: (1) Companies are listed in IDX, conducting export or operating multi-nationally; (2) Companies are fully operational, publishing complete annual reports through 2010 to 2013, never delisted from IDX or discontinue their activities; (3) Companies issued and published financial statements which end on December 31st through 2010 to 2013; (4) Financial statements issued are represented in IDR; (5) Companies which operate as financial institutions are excluded because they are subject to distinctive government regulations; (6) Companies with net operating loss or net operating loss carry forward in their 2010-2013 financial statements are excluded, because they will give confusing results for interpretation (Derashid & Zhang, 2003; Rego, 2003; Richardson & Lanis, 2007); (7) Companies with ETR value less than zero are excluded because they will provide distorted value to ETR and cause model estimation problem (Derashid & Zhang, 2003; Richardson & Lanis, 2007). Also, it is important to note that companies with book losses and tax refund or overpayment will have positive ETR, although they do not pay any taxes for the year; hence, these companies are also excluded.

Empirical Model. Pretax return and effective tax rate are both used in measuring implicit and explicit taxes by prior research (Gupta & Newberry, 1997; Janssen & Buijink, 2000; Jennings *et al.*, 2011). Jennings *et al.* used and modified the empirical model developed by Gupta and Newberry to better reflect the recent condition in global competitive market that did not significantly exist previously. In order to test the relationship between implicit and explicit taxes, this research uses the following multiple OLS regression:

$$ETR_{xy} = \gamma_0 + \gamma_1 PTR_{xy} + \gamma_2 SIZE_{xy} + \gamma_3 CAP_{xy} + \gamma_4 INV_{xy} + \gamma_5 RD_{xy} + \gamma_6 LEV_{xy} + \gamma_7 FOR_{xy} + \varepsilon_{xy}$$

Information: ETR = Effective tax rate; γ_0 = Constants; $\gamma_{1,2,3,4,5,6,7}$ = Variable coefficient (1 to 7); PTR = Pretax return that the company earn from its investment; SIZE = Firm size; CAP = Capital intensity; INV = Inventory intensity; RD = Research-and-development (intangibles) intensity; LEV = Company's leverage ratio; FOR = Intensity of company's foreign operations; ε_{xy} = Residual error; xy = Identification for firm x at year y

Definitions of Operational Variables. Dependent Variable: Efficient Tax Rate (ETR)

Rego (2003) concludes that ETR has been an important measure of corporate tax burden for policymakers and academic researchers for several decades, dating back from the research of Siegfried in 1972. Effective tax rate is used to measure the amount of company's tax payable – its explicit taxes (Janssen and Buijink, 2000). To compute

effective tax rate, the following formula is used: $ETR_{xy} = \frac{TAX_{xy}}{PTI_{xy}}$

Effective tax rate is defined as the ratio of total tax expenses that is liable to company and payable for each tax period (TAX), to its pretax accounting income (PTI), defined as a firm's income before tax (Derashid & Zhang, 2003; Jennings *et al.*, 2011). In calculating tax expenses, this research uses the same approach as other previous research by using the basis of applicable national tax system, which is the generally accepted accounting principle. This measure looks at the permanent difference between taxable income and reported income, ignoring any deferred tax that is caused by temporary

differences between taxable income and reported income (Rego, 2003; Richardson & Lanis, 2007; Jennings *et al.*, 2011)

Independent Variable: Pretax Return (PTR). Pretax return is used to measure implicit tax, in a sense that implicit tax is paid through lower pretax rate of return that investors are willing to receive (Scholes & Wolfson, 1992). Jennings *et al.* (2011) defined pretax return as the ratio of pretax income (PTI) to beginning of year's stockholders equity (EQ), as

described in the following equation: $PTR_{xy} = \frac{PTI_{xy}}{EQ_{xy}}$

Control Variables: (1) Firm Size (SIZE). Firm size is quantified by computing natural logarithm of firm's total assets (Richardson & Lanis, 2007; Jennings *et al.*, 2011): $SIZE_{xy} = (\ln TA)_{xy}$; (2) Capital Intensity. As described in the following equation, capital intensity is measured as a ratio of net property, plant, and equipment to total company's assets (Derashid & Zhang, 2003; Richardson & Lanis, 2007) $CAP_{xy} = \frac{NET\ PPE_{xy}}{TA_{xy}}$; (3) Inventory

Intensity (INV). The following formula presents the calculation of inventory intensity, which is the proportion of a firm's inventory to its total assets (Gupta & Newberry, 1997; Richardson & Lanis, 2007): $INV_{xy} = \frac{INVENTORY_{xy}}{TA_{xy}}$; (4) Research-and-Development

Intensity (RD). R&D intensity is measured as a ratio of research-and-development expense to total sales. If R&D activities are missing, the value is set to 0 (Richardson & Lanis, 2007; Jennings *et al.*, 2011). $RD_{xy} = \frac{R\&D\ EXPENSE_{xy}}{SALES_{xy}}$; (5) Firm's Leverage (LEV). A

firm's level of leverage is computed by dividing long-term debt with total assets, as shown in the following equation: $LEV_{xy} = \frac{LTD_{xy}}{TA_{xy}}$; (6) Foreign Operations (FOR). A company's level of foreign operations is computed by a ratio of foreign sales to total sales:

$$FOR_{xy} = \frac{EXPORT_{xy}}{SALES_{xy}}$$

RESEARCH RESULTS AND ANALYSIS

Population and Sample. After conducting purposive sampling, the following sample is used in this research.

Companies that fulfill the sample criteria are 34 out of 507 listed companies in IDX. This research conducts an observation for the year 2010 until 2013 (four years); hence, the total firm years used are 136. However, after performing normality test, it is found that the data is not normally distributed; therefore, outlier test is performed, deleting 6 firm years and giving final result of 130 firm years to be used in this research. The complete explanation of the test is presented at the following section.

Table 1. Research Sample

Total Population	507
Sample Selection	
1. Companies which do not operate multi-nationally	81
2. Companies which do not publish complete 2010-2013 annual reports	91
3. Companies with annual reports that do not end at December 31	11
4. Companies with annual reports that are not represented in IDR	35
5. Companies which are financial institutions	81
6. Companies with loss or loss carried forward	96
7. Companies with tax overpayment	78
Total Sample Used	34
Firm Years	4
Total Firm Years	136
Outlier at z-value ± 1.96 (level of significance 0.05)	6
FINAL FIRM YEARS USED	130

Data Quality Test. Normality Test. Normality test is performed using Kolmogorov-Smirnov on the unstandardized residual value. After the test is performed, data is concluded to be abnormal because significance level is 0.01 (lower than 0.05). Abnormal data distribution is likely to be caused by extreme fluctuating values between samples throughout the years of observation. Companies' performance tends to vary and this may be caused by a few conditions, both internal and externally. Internally, performance inconsistency may be caused by incompetent workers, poor quality machinery and equipment, lack of good and organized team of management, and many other factors. Seeing it from external way is more complicated. Research by Christiano *et al.* (2010) proposes that the external factors are mainly originated from the market and economic condition that fluctuates overtime. Out of several factors they discovered, the following are the ones which are mostly related to FDI. They call these conditions as 'economic shocks' and classify them in four categories in general.

Outlier test is then performed using z-value of 1.96, portraying confidence level of 95% with error threshold of 5%. After that, normality test is re-performed with the following result:

Table 2. Normality Test

	Normality test before outlier	Normality test after outlier
N	136	130
Asymp. Sig. (2-tailed)	0.001	0.481

From the Table 3, it can be inferred that there are no signs of multicollinearity because tolerance values are all greater than 0.1 and all VIF values are far below 10.

Heteroscedasticity Test. Heteroscedasticity test is performed by using Spearman's rho. If significance levels between unstandardized residual and independent variables are above 0.05, then homoscedasticity occurs. The following result is obtained after the test is performed.

Multicollinearity Test.

Table 3. Multicollinearity Test

Model	Collinearity Statistics	
	Tolerance	VIF
(Constant)		
PTR	.937	1.067
SIZE	.852	1.174
CAP	.665	1.505
INV	.821	1.219
RD	.885	1.130
LEV	.662	1.511
FOR	.911	1.098

Table 4. Heteroscedasticity Test

Variable	Sig	Explanation
PTR	0.582	No Heteroscedasticity
Size	0.881	No Heteroscedasticity
CAP	0.998	No Heteroscedasticity
INV	0.996	No Heteroscedasticity
RD	0.243	No Heteroscedasticity
LEV	0.398	No Heteroscedasticity
FOR	0.483	No Heteroscedasticity

Sumber: Hasil olahan Penulis

Autocorrelation Test. Autocorrelation test is conducted by calculating the Durbin-Watson (DW) value, which then will be compared to the Durbin-Watson Table:

Table 5. Autocorrelation Test

Model	Durbin-Watson
1	1.882

Sumber: Pengolahan Data SPSS

The obtained DW value of 1.882 is then compared with the du value stated in Durbin-Watson table (see Appendix). The number of independent variables used is $k=7$ with $n=130$ as the number of sample. The du value is 1.8282; thus, autocorrelation negative occurs when DW value is between 1.8282 and 2.1718. Since the obtained value is within this range, it can be concluded that there are no signs of autocorrelation.

Hypothesis Tests. The Coefficient of Determination (Adjusted R^2). Adjusted R^2 instead of R^2 is used to analyze the data. The following result is obtained:

Table 6. Adjusted R^2

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.291 ^a	.085	.032	.06093348877

Due to the problematic fluctuating values of R^2 as it has been explained in previous chapter, this research will only examine the adjusted R^2 value, which is 0.032. This shows that there is only 3.2% contribution from independent variables which can explain and influence dependent variable, and their ability in explaining it tends to be limited. Such percentage is considered small and insignificant (below 0.5), since there are many other factors in politics, economic, social, and others, both in national and international scope, which can influence ETR as dependent variable. These undiscussed factors of influence amount to 96.8%.

Simultaneous Significance Testing (F-Statistic Test). This test has a purpose to analyze what simultaneous effect that PTR, SIZE, CAP, INV, RD, LEV, and FOR have over ETR. After processing the data, the following result is obtained:

Table 7. F Statistic Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.042	7	.006	1.609	.139 ^b
	Residual	.453	122	.004		
	Total	.495	129			

This research uses 95% confidence level and 5% error probability. Meanwhile, significance value is 0.139, which is higher than 0.05. This concludes that PTR as independent variables, and SIZE, CAP, INV, RD, LEV, and FOR as control variables, do not significantly affect ETR as dependent variable in overall.

Individual Parameter Significance Test (t-Statistic Test). After observing the overall effect of independent and control variables have toward dependent variable, t-statistic test will measure the relationship that each variables has toward ETR. The following table shows the result of the test.

Table 8. t-Statistic Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.170	.092		1.844	.068
PTR	.010	.008	.106	1.190	.236
SIZE	.001	.003	.039	.416	.678
CAP	.034	.033	.108	1.017	.311
INV	-.032	.041	-.074	-.777	.439
RD	1.717	.982	.161	1.748	.083
LEV	.054	.054	.106	1.000	.319
FOR	.043	.036	.108	1.186	.238

This test observes the unstandardized coefficient B to show the coefficients and relationships between independent and dependent variables, while the standard error is utilized in constructing confidence intervals for the coefficients. Based on the SPSS result, the following regression model can be constructed:

$$\text{ETR} = 0.17 + 0.01\text{PTR} + 0.001\text{SIZE} + 0.034\text{CAP} - 0.032\text{INV} + 1.717\text{RD} + 0.054\text{LEV} + 0.043\text{FOR}$$

From the hypothesis testing, it can be concluded that PTR as independent variable has an insignificant positive relationship with ETR as dependent variable, which means H_0 is accepted and H_1 is rejected. This result is analyzed by referring back to the basic economic theory used in previous research (Scholes & Wolfson, 1992; Wilkie, 1992). This theory states that differences in explicit tax rate because of more favorable tax treatment for certain investments compared to the others coincide with implicit tax due to market competition. However, to prove a strong significant relationship between PTR and ETR, it is subject highly to the market condition where the research takes place, which is why it is subject to various results.

This research shows that, according to t-statistic test, this relationship is predicted to be not significant enough. In line with previous research (Wilkie, 1992; Janssen & Buijink, 2000; Jennings *et al.*, 2011), this weak relationship may be caused by a few circumstantial factors. The role of tax planning and tax shelter has been studied to be causing the weakening relationship between implicit and explicit tax. It disrupts the ideal process of reaching the after-tax return equalization across companies in the economy. Tax planning has been known to have been conducted by companies in response to the constant changes of government tax regulations and policies, which sometimes are less beneficial to firms' profitability. In addition, it is not rare that these movements are conducted in an extreme extent to avoid as much tax burden as possible. In Indonesia especially, where tax is one of the main income for government, tax planning and tax shelter are escalating in a big level.

Moreover, the presence of market frictions, which is hard to eliminate, contributes to this weak relationship. This research has used sample of companies that are traded in the same stock market and in active segments of industries to minimize frictions; however, it turns out that the Indonesian market condition has a considerate level of these frictions that they are causing insignificance towards the PTR-ETR relationship. In FDI context, the movement of capital itself has tax implications, costs, and restraints that hinder the ideal state of a competitive market in which the increase (decrease) of explicit tax is supposed to be fully offset by the increase (decrease) of implicit tax. Thus, companies across the market would reach an equal level of after-tax return. The presence of market frictions, including tax arbitrage, prevents the stated condition from happening, causing the relationship between PTR and ETR to be insignificant.

CONCLUSION

Conclusion. After testing the obtained data, a few conclusions can be made regarding this research: (1) After conducting the test of coefficient of determination, the adjusted R^2 value is obtained to be 0.032, which can be concluded that the variations of PTR and other control variables is only able to explain 3.2% of variations in ETR. This is a relatively weak relationship, because the value is below 0.5. It can also be concluded that there are many other factors that contribute in influencing ETR, which has not been studied or included in this research. (2) According to F-statistic test, PTR, SIZE, CAP, INV, RD, LEV, and FOR are simultaneously insignificant toward ETR. (3) t-statistic test shows results regarding the relationship and significance of individual variable towards ETR. The following model is developed after this test: PTR has a positive insignificant relationship

towards ETR. After referring to previous conducted research, it can be predicted that the role of tax planning and shelter, as much as the presence of market frictions in the market, play the roles in weakening this relationship. Although this research has tried to minimize market frictions by using sample of companies which are traded in the same stock market and in active segments, it is concluded that the condition of Indonesian economic market has frictions of enough level to affect the relationship between PTR and ETR.

Recommendation. The following recommendations are constructed regarding subsequent research: (1) According to Derashid & Zhan (2003), a major limitation common to all ETR studies is the difficulty in examining and measuring the ways or process that enable certain firms to pay lower ETR than other firms. Efforts that a lot of firms make in achieving the lowest tax burden they possibly can, influence ETR in a way that it disrupts the ideal market condition. Future studies should try to investigate the ways by which a lower ETR is achieved and consider this measurement in developing the research; (2) ETR is affected by many other economic factors that are out of the scope of this research. More independent and control variables should be added in developing future research in order to grasp a better understanding in ETR; (3) It is recommended to use longer period of time of data in subsequent studies. Due to a change in Indonesian tax law regarding corporate income tax rate in 2010, extending this research's period beyond 2010 is predicted to possibly cause inconsistent results. Therefore, studies conducted in the following years should be able to obtain data from 2010 up to years after 2013 to make more robust research results.

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